Some medicines must now be mentioned, which have been recommended for the cure of obesity, but which analogy and experience do not approve.

Vinegar has been employed by those who are foolish enough to practice upon themselves; but as it produces thinness only by injuring the digestive organs the benefit is not worth the price paid for it, and no medical man would ever advise the use of such a remedy.

Iodine has been spoken of as likely to do good, from the power it exhibits of stimulating the absorbents in cases of scrofula and tumours. But its moderate use certainly does not cause the disappearance of healthy fat. Indeed it has been noticed by Lugol, and is matter of daily observation at our metropolitan hospitals, that patients frequently acquire a considerable degree of embonpoint during the time they are taking iodine. The cases of tumours and of fat are very distinct. As Dr. Pereira remarks, "The enlargements which these agents (mercury and iodine) remove, are not mere hypertrophies; their structure is morbid, and they must in consequence have been induced by a change in the quality of the vital activity; in other words, by morbid action. Medicines, therefore, which remove these abnormal conditions, can only do so by restoring healthy action." But the action which causes the deposition of fat in the adipose tissue is, though excessive, of a healthy nature, and harm, rather than benefit, is to be expected from the medicine under discussion; that harm which always accrues from a valuable remedy wrongly employed.—*Lancet*, 1849.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

36. *Case illustrating the Difficulties of Diagnosis of Morbid Growths from the Upper Jaw.* By PRESCOTT HEWETT, Assistant-Surgeon, St. George's Hospital. (*Proceedings of Royal Medical and Chirurgical Society*, Dec. 10, 1850.) [The following case is not only interesting as illustrating the difficulties of diagnosis in morbid growths from the upper jaw, but also from the discussion to which its reading gave rise, having elicited the opinions of some of the most eminent men in the profession, relative to the use of anæsthetics, the patient having died on the table, and his death having been caused, there is reason to believe, by the chloroform administered. Though long, we republish the report entire as given in the *Lancet* (Dec. 28), and bespeak for it an attentive perusal.]

The patient, a man aged twenty-five, was admitted into St. George's Hospital, under the care of Mr. P. Hewett, in May, 1848, with a large tumour, of an irregular shape, occupying various regions of the left side of the face. Presenting every appearance of having originated in the antrum, this tumour was found in the front and back part of the cheek, in the temporal fossa, in the orbit, and in the nostril, extending to the back part of the pharynx; round in shape, but lobulated; it was firm and elastic to the touch, perfectly movable, and, in the nostril, of a dead white colour and glistening appearance. The skin, conjunctiva, and mucous membrane of the nose were quite healthy, and no enlarged glands could be detected in any part. The history of the case was, that six years previous to his admission into the hospital, the patient was troubled with a disease, supposed to be polypus of the nose, which had been easily removed with the forceps; subsequently, however, the cheek began to swell; and the tumours gradually made their appearance in the regions in which they were found; all this had occurred without pain, and with very little inconvenience. A year ago caustic had been extensively applied in two different places, large cicatrices making the spots. This treatment had produced no effect on the disease, and no fungating growths followed the application. At different times, there had been extensive bleedings from the nose, which had somewhat reduced the patient. At a consultation of the surgeons of the hospital, it having been resolved that, in all probability, the disease was of the fibrous kind, and connected with the antrum, the removal of the upper jaw was decided upon, Dr. Snow, to whom the surgeons of St. George's are so much indebted for the able manner in which he for a long

time administered chloroform at the hospital, having kindly undertaken to give it on this occasion. The patient being seated in a chair, the operation was performed in the usual manner; but, on removing the superior maxillary and malar bones, it was discovered that the disease was not connected with the upper jaw—it was altogether behind it. The larger portion of the tumour was dissected from off the pterygoid process, to which it was firmly attached. Those portions which were in the orbit and temporal fossa were removed without difficulty, being for the greater part simply connected with some very loose cellular tissue. The patient, having become faint, was placed in the horizontal posture, and a small quantity of stimulant administered, after which he soon rallied. The portion of diseased structure in the back of the nostril was then removed with a strong pair of curved scissors. The pulse having again failed, the patient was at once laid on a bed and carried into an adjoining room; different restorative means were made use of, and he appeared to rally somewhat; but shortly afterwards, as the breathing became embarrassed, an opening was at once made into the crico-thyroid membrane, and, as a last resource, an attempt was made to carry on artificial respiration with a tube; but every effort proved of no avail—the patient soon died. But few vessels were met with during the operation, and no great amount of blood was lost. Little or no bleeding followed the incision in the neck. The details concerning the administration of the chloroform are given in the following letter from Dr. Snow. A careful examination of the bones removed during the operation showed that, in the superior maxillary, the antrum was all but obliterated, the posterior wall of the sinus having been forced, by the tumour lying behind it, against the anterior one; there was merely a chink left, the cavity of which was quite free, and lined by healthy mucous membrane. The malar was much more curved than natural. The structure of both bones was perfectly healthy. The tumours were of a purely fibrous character. At the dissection of the body, it was made out that the tumour had originated in the roof of the left nostril, its main point of attachment having been to the under part of the body of the sphenoid and inner surface of the pterygoid process. Portions of diseased structure were still found in the sphenoidal sinuses, as well as at the upper and back part of the septum nasi. Some loose bits were also found deep in the temporal fossa, and at the back of the orbit. These were lying in the cellular tissue. They were all connected to each other by slender pedicles, one of which passed through a hole in the perpendicular portion of the palate bone; that in the orbit had reached this situation by creeping through the spheno-maxillary fissure. The bones were throughout healthy in structure. The tissue of the growth was purely fibrous. The trachea and bronchial tubes, even to their minute ramifications, contained a quantity of frothy blood. The structure of the lungs was crepitant throughout, but each section presented numerous small, dark spots of ecchymosis, produced by some of the air-cells having been also filled with blood; these organs were otherwise free from disease. The heart was healthy; its cavities contained small black clots, but the greater part of the blood was thin and fluid, and did not coagulate on exposure to air. The other viscera were quite healthy. In his remarks, Mr. Prescott Hewett principally drew the attention of the Society to the great difficulties which at times were found to exist as to a correct diagnosis of the precise region in which a tumour of the upper jaw had originated. Of these difficulties, the present case afforded a good illustration. The history of the patient, and the various regions in which the tumour existed, had led to the conclusion that the disease, having sprung from the antrum, had gradually burst through some of the walls of this cavity, and thence spread to the spots where it was found. The operation and the subsequent dissection proved, however, that the antrum had not been the starting-point of the disease. Mr. Prescott Hewett had little or no doubt that the morbid growth had first begun in the nostril, and had subsequently reached the pterygo-maxillary fossa, either by making its way through the spheno-palatine foramen, or by breaking down a portion of the palate-bone; once in the fossa, the progress of the tumour may easily be traced; it passed into the orbit through the spheno-maxillary fissure, and, in the face, it had in some parts made the bones yield, and in others it had so completely moulded itself to their

sbape, ereeping over their entaneous surfaces, that the outlines of the bones were scarcely diseernible. Mr. P. Hewett's remarks were altogether confined to tumonrs of a fibrous character. The morbid appearances observed about tbe lnngs led Mr. P. Hewett to ask the question whether the administration of chloroform was advisable in operations abont the mouth, where there was likely to be a certain amonnt of bleeding. He had no doubt that the blood found in the lnngs had got there by passing through the glottis, and he doubted very mnch if such would have been the ease had no chloroform been used. Many surgeons, fearing this accident, had of late not failed to condemn altogether the nse of chloroform in these cases; but some, being unwilling to submit their patients to such serious operations without it, had adopted a middle course, administering this agent in the first steps nf the nperation only, boping thus to avoid all risk. It remained still to be proved, bowever, whether, even with this precaution, there might not be danger in using anæstbetics in some operations about ths mouth.

Mr. Fergusson said that the case was interesting in a variety of respects. It served to illustrate the difficulty of diagnosis in cases nf this description. It was evident that the greatest care had been bestowed in investigating the nature of the case; every consideration bad been given to it—as, indeed, no one could doubt on looking to tbe characters of the surgeons who had given their opinions about it; nevertbeless, the disease proved to be somewhat different from what had been expected. It was supposed to bavo been a disease of the superior maxillary bone, but so far as he (Mr. Fergusson) could make out, it was only connected with that bone by lying in apposition with it. From tbe description given of the tumour, he shonld have supposed it to he a tumour of the antrum; and, indeed, had it not been for the very accurate description given by Mr. Hewett, of tho compressed and altered condition of this cavity which was observed lying in front of the tnmour, he would have concluded that it must have originated in this part. In a practical point of view, there was ono feature deserving of special notico. In the description that had been given of the case, he (Mr. Fergusson) had not noticed any allusion to the shapo or form of the front part of the superior maxilla. All that was said was that it seemed to be perfectly normal; that there was not any distortion of the alveolar ridge, the teeth, or the nostril. This would have led him to think the tumour deep-seated, as in most cases of tumonr in the antrnm it expands as mnch in front as at the back part. When there is not any alteration in shape or distension, in the front part of the superior maxillary bone, especially the alveolar stage, the greatest caution should be used in deciding on an operation, becauso the tumour, in all probability, would be deep-seated, as in the present instanee. He confessed that, in the absence of tbe particular changes in the alveolar proeess, to which he had referred, and from tbe circumstanee that the tumour bad extended towards tbe orbit, and upwards and outwards, so as to involve tbe zygomatic ridge and fossa, be (Mr. Fergusson) shonld have felt some hesitation in resorting to an operation. What had occurred bere served, perhaps, to show mors conspicuously the difficulties connected with such cases. There were many other points, with reference to the pathology of thie disease, which he would not then allude to, as they bad been already, on former occasions, discussed in that room. With respect to the influence of chloroform, he (Mr. Fergusson) bad operated very frequently since its introduction, in cases of this description, and some of these operations were very protracted; yet chloroform or ether had been used in these cases, and its application repeated when its anæsthetic effect seemed to be wearing nff; and he had never met with any bad results, or anything whieb would lead him to believe that it might prove injurious. When chloroform was first introduced, he formed the opinion that it ought not to be used in these cases, because the blood trickling down the throat might perebance enter the larynx, and perhaps produce irremediable mischief. He bad himself refused to operate in one ease wherein it was proposed to give ether, but experience bad since taught him that in these there was bnt little reason to dread mischief from that canse. He even bad had cases in whieb the blood had trickled into the larynx, and yet no harm bad resulted. He wonld wish to ask Mr. Hewett how long the operation had lasted, for a pro-

tracted operation of this kind might exhaust even a strong man. In such a case as this, all the circumstances should be carefully weighed, before the fatal result be attributed either to the operation or to chloroform.

Mr. Hewett, in reply, said that the first part of the operation lasted for eight or ten minutes, the bones being easily separated. Taking the period of fainting, and the conclusion of the operation, the proceedings from the commencement did not exceed twenty minutes.

Dr. Webster inquired whether the blood of the patient was fluid and black-coloured after death; or, if bubbles of air were found in the cavities of the heart or veins, as in cases where chloroform was employed in surgical operations, and which terminated fatally, these appearances were almost invariable? An answer to these would assist in forming a correct opinion whether or not the patient's death was in consequence of the chloroform employed to produce insensibility.

Mr. Hewett said that the blood was dark-coloured, and fluid. No air was observed in the heart. He believed that if the patient had died from the chloroform, it was by suffocation, and not as chloroform acting specifically as a poison on the mass of the blood.

Dr. Snow said that he could not agree with Mr. Hewett that the chloroform had any share in causing the blood to enter the windpipe of this patient. In the first place, there was no difficulty of breathing during the operation, nor for some time afterwards. It only came on just before death, which took place after the influence of the chloroform had altogether subsided. In the next place, he had administered chloroform in several other operations for the removal of tumours, both of the upper and lower jaw, and there had been no symptoms, in any instance, of blood having entered the lungs. He exhibited chloroform, almost every week, in operations about the mouth and nostrils, in which there was a good deal of bleeding—such as the operations for epulis, for nasal polypi, and for hare-lip, and cases in which a number of teeth were removed at once, and yet in no instance had blood got into the lungs. The operation for hare-lip, when the infant was laid on its back, with its head in the lap of the operator, perhaps put the glottis to as severe a test as any operation. He had administered chloroform, in nearly twenty cases, with the child in this position, since Mr. Hewett's case occurred; and he had also seen the operation performed in this way several times, in King's College Hospital, without the chloroform. There was a good deal of spluttering, whether this agent were employed or not, but in neither case did any symptoms of blood having entered the lungs ever supervene. He had performed some experiments in relation to this subject. In one of these, a kitten having been made so insensible that it did not flinch on being cut, was immersed over head in tepid water, coloured with logwood, and allowed to remain half a minute. During this time it moved its ribs in the attempt to breathe, but did not draw in any water, for it recovered readily from the chloroform after being withdrawn; and being then killed, its trachea contained no froth, and was not stained by the logwood. Flourens had pointed out, on the introduction of the inhalation of ether, that the functions of the nervous centres were abolished under its influence, in the same order as in asphyxia; and this was equally true of chloroform. But it was not found in asphyxia, by submersion, that a person began to fill his lungs with water as soon as he became unconscious; on the contrary, but little water was drawn in even during the last gasps which took place as he was dying. Indeed, as the glottis was an organ of respiration, it was to be expected that it would retain some amount of sensibility as long as breathing continued. As the blood, in Mr. Hewett's case, seemed not to have entered the windpipe by the wound made after death, in order to perform artificial respiration, it must have entered just before, when the patient was in a state of collapse, and moribund. There were spots of ecchymosis in the lungs, as he witnessed; but the quantity of blood was not enough to cause death so soon, although it might have produced ill effects, had the patient survived. With regard to the fluidity of the blood in the deaths caused by chloroform, he thought that it was probably due to the artificial respiration which had been employed, for he had not found the blood quite fluid in one animal out of a great number which he had killed with that agent.

Mr. Henry Charles Johnson had assisted Mr. Hewett in the operation under consideration. Now, it was suggested that the death might be accounted for in three ways, each distinct from, and unconnected with chloroform. First, the patient might have sunk from the length of the operation; secondly, he might have inhaled the blood during the existence of the syncope; and thirdly, the blood might have trickled through the wound in the trachea, and thus have produced suffocation. In answer to the first of these suggestions, he would reply that the operation was not longer than is usually the case in similar proceedings; the first steps were rapid, and the operation was only suspended during faintness: including the second part of the operation, the whole proceeding was not so long as is frequently the case in operations about the face. He thought this disposed of the first suggestion. With respect to the second suggestion, he was not aware of any case, where, in consequence of syncope during, and collapse after an operation, blood passing down the throat had found its way into the windpipe. Thirdly, the operation of opening the larynx was performed when the patient was expiring; the opening was made rapidly; there was scarcely any blood at all, and he believed none had escaped into the wound. Now, had chloroform any influence in producing the fatal result? For his own part, he had, since the occurrence of this case, abandoned chloroform in all operations about the face. Whether chloroform did or did not facilitate the admission of blood into the trachea, might admit of some difficulty of solution; but of this we were sure, that in the case before us, in which chloroform had been used, blood did get into the trachea and down the bronchial tubes, and death was the result.

Mr. Barlow was certainly quite under the impression that the man's life was destroyed by chloroform. It seemed far more reasonable, far more agreeable to the actual circumstances, to suppose that such had been the case than to conclude that death had been owing to the operation simply. It was gratifying to hear Mr. Fergusson state that he had removed the upper jaw so frequently, where chloroform had been given, without any bad result; this might happen, and yet some degree of risk have attended its administration. Six cases might do well, but the seventh might be followed by the issue of Mr. Hewett's. Looking to the effects of chloroform on the glottis and respiratory muscles, which could in no wise be moderated often, he doubted the propriety of chloroforming the patient in such an operation as that described; for a fatal case had happened in spite of the skilful administration of the anæsthetic agent, and an operation performed with as little delay as that case allowed of. There was no fault attaching to the giver of the chloroform; they were discussing quite another question. He thought the inquiries of physiologists deserving of some consideration in reference to the general operation of an extremely powerful agent. He had often experimented therewith, and he knew of nothing which so extraordinarily affected the muscular irritability; the high irritability of the batrachia was destroyed by it with a wonderful swiftness. In the case before them, blood appeared to have flowed through the glottis, because it was inirritable; the patient could not eject it, because coughing was impossible, so that he was endangered doubly. Mr. Barlow concluded by requesting his distinguished friend, Dr. Marshall Hall, to favour the Society with his valuable experience of the operation of this agent upon animals.

Dr. Marshall Hall observed, that he had listened with the deepest interest to the details which had been read to the Society, which he thought was under great obligations to the author for bringing forward so interesting a case, involving so important a question as that of the administration of chloroform; for it was this, in its largest sense, to which the communication gave rise. He (Dr. Hall) had performed a vast number of experiments on the effects of chloroform on the animal economy, and if he had been asked the question relative to its probable effect on the human subject before it had ever been administered to it, he should have said that its administration would be attended with the utmost danger. He believed that he might declare, that the effects of chloroform on the animal system, by inhalation or imbibition, are displayed, first on the cerebral, secondly on the spinal, and thirdly on the ganglionic systems, respectively, in relation to time. It required the utmost skill to *limit* its opera-

tion to the first of these; and if its influence extended to the second, there was danger, from the failure of respiration; and if to the third, there was sudden death, from the cessation of the circulation. The transition from one of these stages to the other was apt to be sudden, and unexpected dissolution was the terrible consequence. This event had taken place in the human subject; it had been then referred to unsuspected disease of the heart or lungs, but in this opinion he had no confidence; in experiment, the same unsuspected event has occurred. We remember the occurrence, in a lecture by Mr. Brande, at the Royal Institution. That gentleman having placed a guinea-pig under the influence of chloroform, it fell on its side. The lecturer is reported to have said, "The animal will speedily recover from this momentary debility;" but it never did recover! He (Dr. Hall) had seen the same unexpected death repeatedly. And yet it was said that many hundreds, nay, some thousands, of patients, had been placed under the influence of chloroform at St. Bartholomew's Hospital without a single fatal result. The hospitals of St. George and of St. Thomas had been less fortunate. Still it was marvellous how few accidents had occurred. This he ascribed entirely to the extreme caution and skill with which this dangerous agent had been administered, and much credit was due to those praiseworthy members of our profession who have devoted themselves specially to this responsible task. It was not in hospitals, however, but in private practice, that, from the want of equal experience, the danger of administering chloroform was greatest. It was accordingly in private practice that fearful events had most frequently taken place. In general, he believed the fatal result had occurred from the influence of the chloroform on the ganglionic system and the heart. In the case before the Society, it was obviously from affection of the spinal system and defective reflex or diastaltic closure of the larynx. This orifice became paralyzed in its excitability and in its contraction, and the blood present in the mouth was drawn into the larynx and bronchial tubes, inducing asphyxia. That the affection took place in the order he had mentioned was obvious from the simplest experiment. If a frog were inclosed in a tumbler inverted over a plate, and exposed to the vapour of five drops of chloroform, it soon ceased from voluntary, and then from respiratory movements; afterwards the circulation failed. He might also remark, that, tried in this manner, chloroform was a far more dire and active poison than even hydrocyanic acid. There was no question, he thought, that the vapour of chloroform was more dangerous than that of ether, and he had often wondered that it should have been preferred as an anæsthetic agent. Before he sat down, he begged leave to communicate a fact of some interest to the Society. The fellows would doubtless remember the case of amputation read to it some time ago, said to have been performed during a state of anæsthesia induced by mesmerism. It was argued by him, at the time, that the reported perfect immobility of the patient proved too much. Volition being removed, there ought to have been reflex movements. He understood that the man had since confessed that he acted the part of an impostor!

Dr. COPLAND remarked that one circumstance had not been, he thought, sufficiently noticed by the speakers: he alluded to the question, whether the shock of an operation was greater or not, and more or less dangerous, when chloroform was administered. He believed that the shock was greater, and the danger increased when chloroform was administered; he believed that the reaction which followed an operation when no chloroform was given was salutary and advantageous to the patient, and thought the shock was greater when you deadened sensibility in any way. In the case under discussion, it was not known whence the blood in the bronchi had originated. Now, when death occurred from chloroform, the lungs were congested, and the blood in a fluid state. Chloroform relaxed the small vessels, and hence we might explain the presence of the blood in the brenchi and air-cells, by supposing it to have been an exudation from the lining membrane, consequent upon the twofold cause of a relaxed condition of the capillaries, and an unusually fluid state of the blood.

Mr. TRACY said, in this case it appeared, from the statements of all who were present, that the man rallied from the syncope. Now he never heard of, or saw, a case in which such reaction took place, when chloroform destroyed the

patient. Was the death attributable to the influence of shock? In no case, he believed, did blood get into the lungs in operations about the teeth and face when chloroform was used.

Dr. Annison said that, in a fatal case which he saw, death was preceded by the cessation of hemorrhage from the part under the knife; the heart having become remarkably enfeebled, and having ceased to beat. On what grounds did Dr. Snow declare so confidently that the patient did not die of chloroform?

Dr. Snow said that there was no room to suppose that the patient had died from the influence of the chloroform, for, at the beginning of the operation, when the insensibility was greater than at any subsequent period, the patient was only in what he termed the third degree of narcotism; and the fourth degree, in which there is relaxation of the muscles and stertorous breathing, could be induced with perfect safety, and was often seen in operations. Mr. Barlow had stated that there appeared no other cause for this patient's death than the chloroform; he (Dr. Snow) considered that there were sufficient causes. The operation itself was one which the surgeon considered dangerous under any circumstances, and thought it his duty to explain that danger to the patient. In this case it had to be undertaken in a subject blanched by previous loss of blood; and again, unusual difficulties were met with during the operation: the tumour could not be all removed, oozing of blood continued, and the wound could not be closed; consequently the operation might be considered, in some sense, as lasting to the time of death. There was also the shock arising from pain, which was altogether prevented, only in the early part of the operation, in this case. Of all the operations that he had seen, during the three years that he had constantly attended St. George's Hospital, this appeared the most formidable, and the patients having recovered from the immediate effects of all the other operations, under ether and chloroform, it seemed hard upon the latter agent that it should be blamed in this case.

Dr. Webster apologized for repeating his question, respecting the morbid appearances noticed in the blood; as he considered them essential in deciding whether death was produced, in the case under discussion, by chloroform or otherwise. In most of the patients acknowledged to have died from the employment of that agent, air was met with in the heart or veins, whilst the blood was always fluid and black coloured. Undoubtedly, a person might sink from so severe an operation as the one performed by Mr. Hewett, and which was somewhat similar to a case under the care of the late Mr. Liston, where the patient never rallied from the shock, but died very soon afterwards, although chloroform had not been employed. This might also have occurred in the present instance; but he (Dr. Webster) thought, notwithstanding the arguments used, and the explanations made that evening, the death of the individual whose history has been now detailed to the Society, was chiefly owing to the anæsthetic agent employed, and not from the operation, however severe.

Mr. Prescott Hewett replied that no air was found in the heart, and the veins were not examined in reference to the point.

Mr. Charles Hawkins said that conflicting opinions respecting such a case as this prevented younger surgeons from arriving at any conclusion respecting the employment of chloroform in this class of cases. He had seen Mr. Hewett perform this operation, and he never recollected to have seen a patient die so soon after an operation. Patients were rarely, indeed, carried away from the operating table merely to die. The case was more like one in which sudden death resulted from the escape of air into the veins. He would inquire, then, what really was the cause of death in this case? Mr. Fergusson did not attribute it to the chloroform, as he had performed the same kind of operation in six cases since this one, under that agent. He (Mr. Hawkins) had been surprised to hear Dr. Copland express his opinion that the shock of an operation was greater under chloroform than without it. He had always thought the contrary to be the case. If, however, Dr. Copland was right, his opinion offered another argument against the use of this agent. He had seen a patient die suddenly from the shock occasioned by the passage of a bougie.

Mr. Cæsar Hawkins said that it was natural for Dr. Snow to throw off the blame from the chloroform; but he (Mr. Hawkins) would remark, that there

could he no kind of reflection cast npon the nperator; for nll who had witnessed the eareful and ecientific manner in which Dr. Snow administered this agent would be sure that every precaution as to snfcty would he taken. Now, he believed that the dcntb resulted from the presenco of the hlood in the larynx, and that this blood would nover have fonnd its wny into that passage unless chloroform had been administered. It was a very rare accident, and offered no sufficient reason why we were to ahandon the use of chloroform. Notwithstanding what Dr. Marshall Hall had said respecting the dangerous character of this agent, it had been employed in St. Bartholomew's Hospitnl in 6000 cases, and in St. George'e Hospital from its first introdnction into practice most extensively, and yet this was the first case in either hospital in which mischief had resulted from its employment. No doubt, chloroform was n etrong poison, and in St. George's Hospital it had never heen given, he believed, as in St. Bartholomew's, in petty operations, such as drawing a tooth, &c. The only places, he believed, in which deaths had resulted from chloroform were tho Borough hospitals, two deaths having occurred in Gny's and onc in St. Thomas's. In these cases he believed that tho chloroform was administered hy inexperienced persons, and not, ns in most other hospitals, by an operator of Dr. Snow's acknowledged nhility and experience.

Mr. Solly said that the fatal case whieh had oeenrred in his practice had been puhlished by him in all the medical journals. It was quito true that in St. Thomas's Hospital no one was appointed to give tho chloroform, hut still the effects of the agent upon the patient were watched hy a competent person. In his ease the surgery-man had certainly held tho chloroform, but a dresser watched tho patient, and all at once said, "Tho pulse is flagging." The patient died almost immediately. Ho thought chloroform killed hy paralyzing the heart. In Mr. Hewett's case, he thought the loss of hlood produced syncope, and the chloroform so paralyzed the heart as to prevent reaction, and the patient died. In two operations for removal of the upper, and ono of the lower jaw, whieh he had performed, he had relied on the heart recovering from the syncope, to get rid of the effects of the loss of blood, and ehould not give chloroform when much loss of hlood was likely to result from operation. Did Mr. Hewett's patient inhale the chloroform sitting or lying?

Mr. Hewett.—Sitting.

Mr. Benjamin Phillips said that there seemed amongst the epeakers to he very great difficulty in arriving at any satisfactory conclusion respecting tho cause of death in Mr. Hewett's case. But surely every gentleman present must he aware of the fact, that cases of the kind were hy no means of uncommon occurrence hefore ether or chloroform were employed in surgical operations. A great many cases were on record, where the patient died during the operation; they were as inexplicahlo as this case, hut they did occur when no chloroform had been employed.

37. *Results of the Use of Chloroform in* 9000 *cases at St. Bartholomew's Hospital.* By Mr. Skey.—One of the most interesting questions connected with the subject of operative surgery relates to the use of anæsthetic agents employed for the purpose of suspending the function of sensation. This question has assumed a moral, as well as a medical type. It has been urged, that sensation is a natural function of the living organism, and that to suspend it hy artificial agency is to set at nought the ordinances of nature; and that man is born to suffering, as evidenced by the sensibilities of his body. If the soundness of thie argument be admitted, it would he difficult to draw a line whieh would define the boundary at which moral and *immoral* suffering meet; or to say, in what form of suffering our remedial agents may be justifiably resorted to. The sensihilities of our frame are not given us by nature to the end of promoting pain, but to enable us to avoid it. Corporal suffering is no part of the discipline of the mind; nor can it even be generally asserted that its excess exercises a salutary influence on the character. Every movement of our body instinctively points to the avoidance of bodily suffering; why, therefore, should we not as readily and unobjectionably employ the agency of anæsthetic medicines for the purpose of suspending bodily pain, under the circum-

stances of an otherwise painful operation, as we endeavour to mitigate the bodily suffering of any other patient cast down on a bed of sickness? Will not the objection to the anæsthetic action of opium to a region affected by a neuralgic pain, or to the system generally, hold as strongly as that of another agent of the same principle given to avert the pain of an operation?

The medical arguments against the use of anæsthetic agents have a somewhat better foundation. That great and sudden determination to the brain, and an unnatural circulation of venous blood, result from their employment, is undeniable.

It is undoubtable, if the quantity administered be large, and long continued, that symptoms resembling those of apoplexy present themselves, in the form of extreme congestion of the vessels of the face, stertorous respiration, and total insensibility; and it cannot be denied that occasionally its full administration leads to headache, vertigo, and languor of some days duration; and cases are recorded in which death itself has followed in the course of an hour or more after its employment. It must be observed, however, in pursuing this question in strict accordance with the laws of evidence, that we have no *proof*, in the cases above referred to, that death was the direct effect of the supposed cause. The parties administering it were not fully experienced in the mode of its application. They entertain the *opinion* that death was referable to it, while it cannot be disputed that the fatal issue may be attributable to other causes: and, in one example, it appears more reasonable to refer the death of the individual to a suspension of the function of respiration by violence, than to any obnoxious agent circulating through the lungs, or brain. On the other hand, the records of St. Bartholomew's Hospital point to its successful administration in upwards of 9000 cases; in not one of which, including the aged and the young, the healthy, the infirm and the asthmatic, has its employment left a stain on its character, as an innocuous agent of good. Under all circumstances, its careful employment may be unhesitatingly resorted to in all cases, excepting only such as are marked by determination to the brain of an apoplectic type; secondly, under circumstances of great and serious exhaustion from loss of blood; and, thirdly, in diseases of the heart. In these conditions of the system, it is perhaps better avoided.

The agent in general use is chloroform, and one word may be added as to its administration. It appears indisputable that its influence on sensation precedes that on consciousness. I have employed it on several occasions, in which a patient has been conscious of all that has been passing around, and yet who has declared himself to have been totally insensible to pain. This state of his system has arisen from the moderate use of the agent, ample, indeed, for all purposes of utility, though somewhat difficult to regulate in quantity sufficient for the required object.

I prefer its gradual administration. I do not think it desirable to exclude atmospheric air, employed as a diluent during the process of inhalation. Its influence should be gradual, not sudden. I consider its application through the medium of a cambric handkerchief laid on the face, preferable to the use of instruments made for the purpose of excluding atmospheric air, and food should be rigidly avoided before its administration, otherwise sickness will frequently follow.

Against the occasional convictions or objections of others to its employment, I place the strong, and to my own mind the unanswerable fact, that it has been successfully used in so large a number of cases in St. Bartholomew's Hospital since the period of its introduction; that these cases have been indiscriminately taken, and that its objections have not yet made their appearance before the observant eyes of the medical staff of that institution, either by promoting danger during the operation, or protracting the recovery of the patient after it. In one class of cases its employment is especially applicable, viz., in that form of disease in which the pain of an operation is the chief warrant for its non-performance, and in which the recovery from a chronic disease is left to nature, that might be greatly hastened by the hand of art; such, for example, as the removal of a piece of dead bone.

Up to the period of the introduction of chloroform, a surgeon was very un-

willing to subject a patient to the painful process of sawing and chipping away portions of dead bone, with a view to reach the medullary cavity, because the operation was both a painful and a protracted one. The consequence was, that an hospital bed was occupied by a patient thus affected, for many months, to the exclusion, perhaps, of three or more claimants, who would have successively occupied it. But by the aid of chloroform the operation is now performed unconsciously to the patient, and the period of his recovery greatly abridged. With the three exceptions above mentioned, I cannot hesitate in strongly recommending its administration in all cases of large surgical operations; believing its discovery to be the greatest blessing conferred on the profession of surgery during the last century; and although I have seen its employment pushed, on many occasions, apparently to the verge of apoplexy, I cannot say, even in such examples, that the good has not largely predominated. —*Operative Surgery.*

38. *Pathology and Treatment of enlarged Subcutaneous Bursæ.*—We have given, in a preceding department of this number, the anatomical account of these structures by Mr. Wm. Coulson, and we insert here his observation on the pathology and treatment of them, extracted from the *London Journal of Medicine* for January last.

A correct knowledge of the situation, volume, form, and position of the superficial or subcutaneous bursæ, will, on most occasions, enable the surgeon to appreciate the character of a tumour due to an increased secretion of the fluid in the interior of these sacs, to a thickening of their walls, or to an inflammatory action set up around and within their tissues. The symptom which naturally first attracts attention is the existence of an oval, colourless, elevated swelling, in an unusual situation. Should the surgeon happen to be ignorant of the previous existence there of an original bursal apparatus, for the protection of the integuments and for facilitating motion, he is at first lost in conjectures as to what the swelling may be. This has often happened. But, aware of the existence of the superficial bursæ, and of the localities which they constantly occupy, the first glance at the case not unfrequently reveals to him all he requires to know. I need not therefore dwell on this symptom, remarking merely that the tumour may be small or large, movable, colourless, or deeply inflamed; or occasionally ulcerated on its surface, and discharging pus and serous-looking fluids; or, by long neglect and the influence of time, it may appear as a firm unyielding tumour, without fluctuation or elasticity.

Even when uncomplicated, the enlarged bursæ occasionally, though not uniformly, give rise to symptoms meriting attention in a history of these affections. A certain amount of inconvenience is often felt, varying in intensity with the volume, situation, and condition of the swelling. The enlarged anconal bursa, for example, may attain a considerable size, and yet give rise to no more inconvenience than a slight sense of weakness after fatigue; even the patellar bursa may be enlarged without proving troublesome to the patient. But in others, and these, perhaps, form the majority, it is otherwise. Those in the hand, especially the carpal, cause a great sense of weakness; they are unseemly, and the deformity becomes so unpleasant to the patient, as to induce him to request the removing of the swelling at all risks. In like manner, those over the malleoli deform the foot, and cause other inconveniences. Much lameness often accompanies the enlarged patellar bursa; whilst the enlargement of the bursa over the first joint of the great toe produces not unfrequently the most intense suffering. Inflammation and suppuration follow; and death has been known to supervene from such a course, when injudiciously interfered with by the surgeon. Generally speaking, then, the symptoms indicating the presence of an enlarged bursa are sufficiently well marked to lead to a correct diagnosis.

A knowledge of the course of the tendons will enable the surgeon to discriminate between the enlargement of a superficial bursa, from that more troublesome and dangerous affection, the enlargement of the deep or profound; and he will regulate his treatment accordingly. Of these I do not speak at present, confining my remarks wholly to the system of the superficial bursæ. These swellings, then, interfere with the free use of the limbs in which they happen

to occur. The integuments may inflame and suppurate, and in this condition the case may for the first instance be brought to the surgeon. If neglected now, they cause intense suffering. The cause of the pain is not uniformly the same. In the enlarged bursa over the great toe, for example, considerable pressure may be endured, provided a corn has not happened to be induced by that pressure over the enlarged bursa. When this happens, the pain becomes intolerable, and is seemingly disproportioned, if I may say so, to the other symptoms and appearances; but it is well to know this, for the partial removal of the corn by the knife will often give immediate and great relief. A very usual symptom is a tingling sensation running down the limb, often attended with tenderness on pressure.

The position of the enlarged popliteal bursa necessitates a careful diagnosis; it may be mistaken for abscess, or for other still more dangerous affections. It is sufficient merely to caution the surgeon on this point.

The detection of the enlarged bursæ in the axilla, and in the groins, and the discriminating them from other diseases will occasionally require great attention on the part of the surgeon.

Enlargements of the superficial bursæ have frequently, no doubt, been confounded with encysted tumours; their sequelæ also present difficulties in the way of a correct diagnosis, to be overcome only by a careful observation and history of the case.

Enlarged bursæ may be either simply enlarged, or the enlargement may be accompanied with inflammation and all its usual appearances. Erysipelas may arise in the course of the disease; or at least, œdema of the superficial fascia or cellular layer, in which the bursæ are situated.

Pathology.—The morbid anatomy of this system of organs has not been made the subject of any extensive researches. What has been observed amounts to this: the contained fluid, which in health merely bedewe the surfaces of the sac, increases in quantity and alters more or less in quality. Originally, perhaps, more complex than chemists suppose (such at least seems to have been the opinion of Schreger), it may undergo further changes, as a result of chronic or acute inflammation. At times, the fluid resembles the outer layer of the crystalline lens, or the vitreous humours; that is, it partakes more of the character of a semi-solid than of a liquid; at other times, it is much more fluid, or it is more serous, obviously less abounding in albumen.

The semi-fluid substance has sometimes a yellowish appearance; at other times a reddish hue; sometimes it is very fluid, of a dark, dirty colour, the product, no doubt, of an inflammatory action. The sac may be wholly obliterated, or its walls so greatly thickened and condensed as to represent a solid tumour; or the enlarged bursæ may show a dropsical character, with softening of the inner membrane, perforations, and enlargement of the traversing tendinous cords. The absence of many of these bursæ may depend, no doubt, on their obliteration in early years from blows, pressure, or other accidental violence.

The morbid appearances found in connection with the enlarged bursa of the great toe have little or no reference to the smaller bursæ itself, but to the deformity caused by the simultaneous displacement of the metatarsal and digital bones of the toe. Nevertheless, when, by a separation or spreading out of the distal end of the metatarsal bones, the head or extremity of the first metatarsal bone becomes so prominent on the inner side of the foot as to be mistaken for an osseous tumour, the integuments passing over it become much attenuated in those cases where the deformity occurs in the adult. If congenital, or occurring in early years, no such attenuation happens. The bursa itself, on dissection, presents a variety of morbid appearances, according to the progress made by the displacement of the metatarsal bone, and of the phalanges of the toe. The ligaments also undergo changes, but I cannot say that I have ever observed the formation of accidental bursæ amongst their fibres. Fungous growths have been seen growing from the inner surface of enlarged bursæ; and ill-conditioned sores are also sometimes present, depending partly on the nature of the surfaces affected, and partly on the constitution of the patient.

Causes.—A variety of causes likely to produce enlargement and subsequent

disease of the superficial bursæ, have been stated by systematic writers. Unfortunately, however, by confounding these organs with the deep bursæ and synovial sheaths of tendons, or by a meagreness of detail, many otherwise interesting observations have failed to improve our knowledge of the disease. The formation of accidental bursæ I have shown to be, in every instance, doubtful, whether on the prominent part of the spine in deformities of this column, or in any other part of the body. The inflammation and enlargement of the bursæ over the great toe, happen how it will, is merely an enlargement of a bursa already existing there, and not a new formation.

Enlarged bursæ are frequently ascribed to severe pressure, sudden or long-continued, to blows, or other external violence; and to such a cause, no doubt, many cases may be traced. At other times, bursæ enlarge wholly independent of any such cause. It has been usual to speak of the enlarged patellar bursa as "the housemaid's knee," of the enlarged anconal bursa as the "miner's elbow," etc.; but many cases of enlargement of the bursæ cannot be so explained. Thus, then, they not unfrequently originate without any assignable cause. It has been said that corns and bunions (diseases very opposite in their nature, though strangely enough, associated in surgical works), and enlarged bursæ, ganglions, and tumours, are much more numerous in the rich than the poor; of this, however, I have my doubts. The mechanical causes assigned for the production of the enlarged bursa over the great toe, and for the deformity of the foot, so frequently preceding re-enlargements of the bursa, and giving rise to it, can be distinctly refuted. I allude more especially to the theory that such deformities and diseases are caused by tight shoes.

It merits notice, that those who stand out most for the efficacy of mechanical causes in the production of such diseases, have uniformly avoided offering any explanation of the circumstance, that the disease I have just alluded to (enlarged bursa in the deformed foot), appears first not unfrequently in one foot, and is even confined to that foot, be it right or left; but if a rigid shoe were the producing cause, both feet ought clearly to be affected simultaneously. Again, when enlarged bursæ occur, which cannot be traced to any mechanical injury, it not unfrequently happens that they occur at once in both limbs; this need not surprise us, as the laws of symmetry go far to explain the occurrence. Some have carried the idea of the production of enlarged bursæ by accidental causes so far as to include under the same category the actual formation of the healthy sacs, creating the system whose nature I now describe. They have also found bursæ in situations where I cannot say I have ever observed them; namely, around cords, and between these semi-horny productions, and the true skin: but no such productions exist so far as my observations go, nor are they required to explain the intense suffering arising from the pressure over a corn. The wedge-shaped body is at that moment slowly, but surely, growing inwards, piercing the true skin, and tearing its delicate structures asunder. Take off the pressure, or remove the offending wedge, and the pain ceases.

Treatment.—It has been shown that many of the subcutaneous bursæ of the body are occasionally wholly absent, or, in other words, never were present. In this sense, then, they are not essential structures, at least not in these persons. But it has also, I think, been proved that such bursæ, when enlarged, may be obliterated by pressure, or the same result may be affected by pressure and puncture combined; or by inflammation, suppuration, granulation, and consequent adhesion of surfaces; or, lastly, when, losing their original character, they have attained, by means of fibrinous deposits, the appearance and nature of a solid tumour, they may be extirpated by the knife, and so altogether removed. These considerations, aided by a sound anatomy and physiology, which we owe chiefly to Schreger, have led me to the adoption of a simple mode of treatment, applicable to most, if not to all cases, of enlarged bursæ.

Let me first suppose, that a case of enlarged bursa, unaccompanied with any other affection, no matter where placed, presents itself; that of the great toe need form no exception; an enlargement of the natural patellar, anconal, or malleolar bursa; the question arises, how is it to be treated? Abundance of evidence exists to show, that the treatment by rest and pressure, simple friction, blistering, friction with mercurial ointment, iodine, etc., all but uniformly fail in effecting a permanent cure.

When these fail, recourse is had to a puncture, which, made with a lancet, amounts generally to a short incision; or an incision, more or less extensive, is made into the enlarged bursa, the contents evacuated, and pressure applied. This method, no doubt, succeeds; but it is unnecessarily severe, and is not unattended with danger, even in the uncomplicated class of cases. But it not unfrequently happens that, before the surgeon has seen the case, inflammation of the integuments, and of the superficial fascia in which the bursa lies, has set in, with more or less severity. Now, in such cases, the modes of treatment alluded to are clearly inapplicable, and have occasionally been attended with very serious results.

Mr. Key, in an excellent memoir on ganglia or bunion, distinctly refers to a case in which death happened from the incantious interference of the surgeon. He is speaking of the enlarged bursa on the great toe, which complaint, when complicated with the peculiar deformity I have already spoken of, he calls bunion. "I have known," he says, "gangrene of the foot and death ensue from opening an inflamed and suppurating bunion; and in three cases, exfoliation of the bones, with a most tedious and painful suppuration of the surrounding structures." He condemns all interference in such cases, in which opinion I coincide, although maintaining very different views, as to the nature of the affection, from those of the distinguished surgeon whom I have just quoted.

The mode of treatment which I prefer to all others is simply puncturing of the enlarged bursa with a grooved needle, such as is used for exploring tumours and swellings of doubtful character. After the evacuation of the contents, pressure is applied by means of soap-plaster and bandage; this is renewed from time to time, and puncture of the sac repeated if necessary. The result is uniformly a permanent and safe cure. If to this we add the almost painless nature of the operation, we have in this mode of treatment all that is satisfactory to patient and surgeon.

When the enlarged bursa becomes seriously inflamed, we should endeavour, by rest and other means, to subdue the inflammation; nevertheless, a puncture such as I have described may be practiced, even in these cases, with advantage to the patient.

In a case of anconal bursa, accompanied by high inflammation, I punctured the swelling with a grooved needle; pressure was employed; no bad results followed, and the patient recovered. Miss M., æt. 50, applied to me, October 18th, with an enlargement of the bursa over the right olecranon, the skin being highly inflamed. The inflammation had existed for ten days, and became so severe as to compel her to seek advice. I punctured it, and two teaspoonfuls of dirty-looking serous fluid came out; pressure was applied, and at the tenth day she recovered.

Sometimes the integuments over the bursa ulcerate, and under these circumstances pressure may also be employed, as in cases of simple puncture. In cases of long standing, when the enlarged sac has put on the appearance of a sarcomatous tumour, excision is no doubt the remedy, having a due regard to the integuments. The mode of treatment by the seton has been strongly recommended by many good surgeons, and I have myself adopted it with success; but a more enlarged experience has convinced me that this mode of treatment, besides being a tedious and unnecessary process, is not on all occasions unattended with danger. I think it only applicable to those cases where the question arises as to their destruction by the seton, or removal by the knife.

The following interesting cases were communicated to me by my friend, Mr. Cocks, of Hatfield, who has kindly permitted me to publish them.

"I had," says Mr. C., "for several years, an enlarged bursa on the second joint of the left thumb, produced by a blow on the fore part of the saddle, in checking the bridle of my horse. It became as large as a pea and was rather annoying and unsightly; I punctured it with a lancet, when a pinkish crystalline mass came from it; pressure was applied, and it healed. It soon grew again, and again, and the same operation was repeated. But, tired of this plan, after opening it, I rubbed the inside with a camel's-hair brush, dipped in a solution of nitras argenti (4 grs. to ℥j of water). In a few days, it suppurated; the lining membrane sloughed away; it soon healed, and has been so for more

than a year. The next case was under my son. A servant girl, from London, had a very large bursa on the left outer ankle, just below the end of the fibula, stretching across the dorsum of the foot, about two inches long, and at least an inch wide. She had applied to several medical men in town, all of whom advised, 'nothing to be done.' It was opened by my son; solution of nitrate of silver was injected into it, and pressure by compress and bandage applied. In a few days, the greater part of the sac was obliterated; the fluid (which in this was limpid) collected in the non-adhering portion. The same treatment was applied to this part, which was followed by considerable swelling of the foot and leg. The inflamed leg was treated with cold saturnine lotion; but a warm poultice was applied to the tumour, in order to bring on suppuration as soon as possible. The case went on favourably; and in three weeks she was able to go about quite well."

No cases of enlarged bursæ have attracted more attention than that of the great toe; when painful and enlarged, it is difficult to treat, for reasons I have partly explained. So much confusion prevails in surgical works, as to the true nature of the proper method of treatment of this troublesome bursa, when enlarged and inflamed, that I may hope to be excused, if I again direct attention to it. The bursa situated on this part may become enlarged and painful, like any other superficial bursa, and require, for its relief and cure, the treatment I have recommended. But that which, in a peculiar manner, complicates the pathology of this enlarged bursa, is the accidental deformity caused by a projection inwards of the digital extremity of the first metatarsal bone. The phalanges of the great toe itself turn outwards to such an extent as to overlap, or pass under, those of the second—a deformity, in fact, amounting to all but complete dislocation. As the metatarsal bone recedes more and more from the second, the digital extremity seems to enlarge, causing a remarkable prominence inwards of this part of the foot.

In the mean time, as the deformity increases, the bursa is placed daily under pressure, more and more severe; the same shoe no longer fits the form of the foot, now much broader in the distal extremity of the metatarsal region; the bursa enlarges, and becomes extremely painful. A succession of bursæ form on the same spot; they open, and perhaps suppurate; and cases are stated to have occurred in which the joint itself has been laid open, and caustic applied to the inner projecting portion of the metatarsal bone, as if it were of morbid growth.

The disease, then, in its most aggravated form, that is, when complicated with this deformity, consists, simply, in an inflamed bursa, generally produced by pressure, with a partial dislocation of the great toe, mainly dependent on a displacement inwards of the digital end of the metatarsal bone. As these two affections are quite distinct, though often confounded, I need not here inquire as to the causes giving rise to the deformity. It will be sufficient to observe, that tight shoes, or rather shoes no longer fitting the altered form of the foot, however they may give rise to an enlargement of the bursa, in no case produce the deformity; for it is now universally admitted that this deformity is most frequently congenital, or comes on in very early life; that it occurs in hundreds who never wore shoes or boots, and that, even when present, it does not necessarily give rise to enlarged bursæ. The cases which most frequently come before the surgeon occur in persons who get the deformity after the meridian of life. This deformity takes place as a result of the weakening of those structures binding together the metatarsal bones; the larger one recedes from the second, and the muscular forces, acting on the great toe, assist in adding to the deformity, by causing it to approach the others. The treatment of such complex cases is exceedingly difficult. It is here that rest, in the recumbent posture, becomes absolutely necessary; the inflammation must be subduced, or allowed to subside. Should a corn have formed on the enlarged bursa, it had better be cautiously pared down, as the skin has probably become much thinner over the bursa. When the foot has become tranquil, other questions arise as to the treatment, chiefly bearing on the form of the shoe; a boot, properly made of very soft leather, such as is worn in France, may be used without aggravating the complaint. Shoes, I apprehend, are had, as they necessitate a

somewhat tight ligature over the instep; this causes intense pain immediately below it, or nearer to the toe. In time, the integuments may and do become accustomed to the form of the foot, and the hurts no longer enlarge. This, I think, is the ordinary course of events, even in cases by no means unfrequent where the deformity has proceeded to its greatest extent. When the deformity is natural to the person, the hurts do not naturally enlarge, and therefore give little or no trouble.

39. *Treatment of certain cases of Hare-lip.*—[E. A. Lloyd, Esq., in a clinical lecture on surgery, lately delivered at St. Bartholomew's Hospital, related the two following cases of complicated hare-lip, which were highly interesting from the successful application of a new mode of overcoming the difficulties met with in some complicated cases.]

Case I.—*Hare-lip, with a large portion of the superior maxillary bone projecting through the fissure, cured by operation.*—The child, Eliza Fisher, was admitted in Sept. 1849, during the time I was absent from town, and when Mr. Paget was attending to my patients in the hospital. On my return she was handed over to me in a most emaciated state, perfectly pallid, and with patches of eczema impetiginodes on different parts of the face and body, with diarrhœa, very little appetite, and altogether in such a miserable state that no one would have been justified in performing any surgical operation at that time.

A large portion of the superior maxillary bone was projecting through the cleft of the lip; not perpendicularly in the natural position of the bone, but turned upwards and forwards, and projecting horizontally, in a direction nearly at right angles with the normal position of the teeth. The fissure extended through both hard and soft palate. The state of the child's health was at that time so bad that it was little expected there would ever be an opportunity of performing an operation. But, in a short time, by the employment of appropriate medicines, the diarrhœa was checked, the condition of the stomach improved, the appetite increased, and the cutaneous disease subsided. The cod-liver oil was freely administered, and, in a few weeks, the health of the child was so far improved, and it gained so much flesh and strength, that it was considered means might be commenced to obviate the deformity without any risk. Before uniting the fissure in the lip, it was necessary to get rid of or change the position of the projecting piece of the superior maxillary bone. The practice in this hospital has hitherto been to cut off the projecting part; but this plan leaves a gap in front of the bone which is never filled up, and which remains a deformity for the whole of a patient's life, and interferes materially with the power of articulation.

In order to obviate this inconvenience, it was attempted to push the portion of bone back into its proper place, by keeping continual pressure on it by means of a pad. This plan was tried for several weeks, but it failed entirely. I then determined to forcibly break down the piece of bone with a strong pair of forceps, to bend it into the gap, and leave it to become fixed there. This was easily accomplished, the soft parts having been previously divided. A small compress of lint was placed over the part so as to confine the bone in its new position, and kept in its situation by means of adhesive plaster.

No bad symptom whatever followed this operation, and the piece of bone was easily retained in its new place, and in about a fortnight it became firmly fixed there. By this means the gap in the superior maxillary bone was entirely filled up. The ordinary operation for hare-lip was now performed; viz., the edges of the fissure in the lip were pared, and the two even surfaces were brought together in the usual way with hare-lip pins.

There was some considerable difficulty, however, in doing this, for the nose was twisted; also one side of the fissure in the lip was much longer than the other: so that in order to adjust the edges properly, it was necessary to pare the edge of the shorter side of the fissure in such a manner as to make the raw surface of a convex form; thus leaving a surface on the shorter side of sufficient length to unite to the whole of the longer edge of the fissure.

The uppermost hare-lip pin was discharged by ulceration on the third day, which resulted from the great force required to bring the parts into contact at

the time of the operation; and in consequence of this a small aperture was left.

The other pin was allowed to remain two or three days longer; and when it was removed the two raw surfaces were found to have firmly united below, but the aperture left by the ulcerating out of the upper pin still remained. The edges of this aperture having healed, it became necessary to detach the cuticle from them, and then bring them into contact as in the first operation.

I have always found that strong liquor potassæ is the best caustic to apply in these cases, for the purpose of detaching the cuticle; and in this case it was applied. The two raw surfaces were kept in contact by means of a long strap of adhesive plaster passed all round the head and above the ears, the two ends being crossed over the wound in front.

It is necessary to pass the plaster all round the head, otherwise it will frequently slip, and thus fail in keeping the two sides of the cleft in continual contact with each other.

I have never known this plan of treatment fail in any case. In a few days the aperture was perfectly closed, and the child left the hospital, not only cured of its unsightly deformity, but likewise in the enjoyment of a good state of health.

Ol. jecoris aselli was continued with marked benefit during the whole of the time.

The next case I will relate to you was certainly the most unsightly instance of this deformity I ever met with, and one in which the plan of breaking down the projecting piece of bone, instead of cutting it off, was perfectly successful; and a most satisfactory cure was the result.

Case II.—*Double Hare-lip, with the central portion of the superior maxillary bone so elevated as to make a right angle with the rest of the jaw, cured by operation without cutting off the bone.*—In this case, which came under my care at the hospital a few months ago, a portion of the superior maxillary bone, about half an inch in breadth, with a portion of the lip attached to it, was projecting upwards and forwards, at right angles from the natural position of the bone, carrying with it the septum nasi, and thus elevating the nose in an extraordinary way, the alæ nasi being at the same time widely spread out.

This elevation of so large a portion of the front of the face caused a deformity so hideous that the "human face divine" was scarcely recognizable. So dreadful, indeed, was this deformity, that to remedy it by any operation was almost despaired of.

But I determined to make the attempt, even in this case, feeling assured that all cases of hare-lip, however bad they may be, can always be considerably relieved by operation.

I therefore strongly advise you to operate in all cases that may be placed under your care.

This child was also in a most emaciated state; it was brought up entirely by hand; the nature of the deformity rendering it impossible for the child to take any of its food in the natural way.

As the means most likely to afford support and strength to the infant, cod-liver oil was given at first, in doses of one drachm, three times a day: but it was, after a week, increased to two drachms. This having been continued for three weeks the child's health was so much improved, that I determined to break down the projecting piece of bone.

I should tell you that, during the whole of this time, Mr. Ayre, one of my dressers, on whose diligence and attention I can most implicitly rely, had attempted, by slight pressure continually applied, to press down the projecting piece of bone; but this was of no more use than in the case I have just related to you. I first dissected up the central portion of lip from the projecting piece of the bone, and then with a strong pair of forceps broke the bone, and forced it down into the gap. After this was accomplished, a pledget of lint was placed on the broken piece and confined there by means of sticking-plaster carried round the head and face, so as to prevent the bone from again projecting, having previously raised up the piece of lip which I had detached.

The bone having, in a few weeks' time, become firm in this position, I ope-

rated on one side of the lip in the usual way, and brought the edges together by one common suture and one hare-lip pin. There was not room for two pins.

This operation was quite successful, and in about three weeks I determined to operate on the other side. Here a difficulty presented itself, the edge of the fissure on one side being much longer than that of the other, the shorter side being that of the central portion of the lip. The pairing, therefore, of this edge was carried to a certain distance round the lower extremity. By this means the two raw edges were made of the same length, and brought accurately into apposition.

The edges of the cleft readily united, and the patient is now quite recovered, and, instead of being a hideous object, is now a really good-looking child. The nose, too, which was flattened at first, is at present much more prominent.

The child will be brought to the consulting room to-morrow, when you may have an opportunity of judging for yourselves of the success of the operation.

I never saw so much projection of the bone as in this case.

In cases of very young children, I recommend you always to try pressure for some time when the bone is projecting. It may not unfrequently be reduced by that means, and, in proof of this, I could, if it were necessary, adduce many cases.

On no account cut off the projecting piece, for, although the highest authorities have recommended that practice, I feel convinced that it is quite unnecessary, and that by so doing you will render the articulation of the patient imperfect for his whole lifetime; and, in many instances, much deformity will result, from the falling in of the lip, there being no support for it.

Although, indeed, by the removal of the part, you accomplish your object in one operation, that slight advantage should not be considered when the patient's comfort for life is at stake.

We frequently see persons who have been operated on for hare-lip, with a small V-shaped cleft remaining at the bottom, when the paired edges have not united. This, I imagine, arises from the parts retracting below the lower needle, and not being kept in contact long enough to enable them to unite. I therefore advise you, in order to obviate this, in all simple cases of hare-lip to make both the raw surfaces of a concave shape; and by this means you will leave a sufficient quantity below the lower needle to allow for a certain degree of retraction, without a gap in the margin being left. This mode of proceeding I have followed in the hospital for many years.

There is another plan which I have also sometimes adopted to prevent a notch remaining in the lower margin of the lip. I leave portions of what I slice from the edges of the fissure attached to the inferior angles of the fissure; turn them down with these raw surfaces opposed to each other, and confine them in that situation. By this proceeding, instead of a notch being left, the central portion of the margin of the lip may be made to project. It is many years since I first had recourse to this proceeding.

Sometimes the edges of the fissure are so far apart that it requires great force to bring them together, and in these cases they will not readily unite. It is therefore necessary to separate the parts very freely, and far back on either side; and I have met with cases in which the deficiency of lip has been so great that there was no possibility of keeping the edges of the fissure sufficiently in contact without making a perpendicular incision on each side of the lip, commencing at the outer side of each of the alæ nasi. By this means you will always be enabled to bring the edges so easily together that they will readily unite. The incision should not be carried through the membrane of the mouth, but merely through the common integument and muscles. It will sometimes suffice to make an incision on one side only. This cut generally heals readily, and little or no mark remains.

When the surfaces have not united, although the pins have been taken out or have discharged by ulceration, the edges may be readily kept in contact by a long narrow piece of plaster, bound round the head in the way I have described.

Bandages of various kinds have been recommended for this purpose, and

were formerly much used in this hospital; but I think the plaster a far more certain application, as it is less likely to slip, and is much more easily applied.

The coronary artery will sometimes bleed very freely, but it should never be tied, for the presence of a ligature would necessarily impede the healing process, and thus render the cure more tardy. But it is of course of great importance to lose as little blood as possible in all operations on children. I therefore always pass the pins through the two sides of the lip as quickly as possible, and then draw the parts together by the twisted suture, without wasting any time in trying to stop the bleeding, for that will always cease when the parts are thus brought together.

With regard to the age at which this operation is best performed, there has been great difference of opinion; but, so far as my experience goes (and I have operated as early as three weeks and as late as the twenty-first year), I do not think, in simple cases, it makes much difference. In the more complicated cases, the operation should always be performed at the earliest period.

I should, however, avoid, as far as possible, the period between six months and two years, because dentition is then going on. As a general rule, I think that the earlier you operate the better; for the most successful case I ever had was in a child, as stated above, only three weeks old.—*Medical Times*, Feb. 1, 1850.

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40. *Excision of the Head of the Femur.*—Mr. Haynes Walton read a paper on this subject before the Medical Society of London, December 14, 1850. After remarking upon the diversity of opinion concerning the propriety of this operation, the author said, the leading question was, at what stage of the disease the operation should be performed. There were two considerations to be taken into account: 1, the local; 2, the constitutional. With reference to the first, he thought, when the discharge was excessive, thin, dark, and of bad odour; in respect to the second, when there was much hectic fever. If, on examination, disease of the internal organs could not be discovered, especially of the lungs, the operation should take place. There was a question whether disease would not sooner or later come on in these from the effects of the local disorder upon the constitution, if the local mischief were not removed.

The author did not consider the acetabulum to be so often diseased in morbus coxæ as the head of the femur; and that, when diseased, it had greater power of reparation.

He believed non-dislocation of the head of the femur to be diagnostic of soundness of the acetabulum; and that, by exploratory incision, or by passing the finger through a sinus, the state of the acetabulum might often be discovered. If there were no disease in the acetabulum, the operation would most probably be successful, although cases had turned out well where there had been disease in that portion of the joint. Out of fourteen cases, twelve of which had been collected from different sources—the other two having occurred in his own practice—six had proved fatal: one had died from renal disease, another from hemorrhage from the profundic vein, another from diarrhœa: the cause of death in the other three was not given.

The operation was in reality much less severe than it appeared to be: the wasted state of the parts facilitated the operation, while the loss of blood was remarkably small.

The author did not advocate removal of the trochanter as well as the head of the bone. The long interrupted splint was the best apparatus to apply after the operation.

Mr. B. Travers gave great weight to the opinions of Cooper, Cline, and Hunter, all of whom were averse to the performance of the operation in question. He thought that confidence should be placed in the reparative powers of the body, and that, if the case were really curable, the operation would not be required. Even if the operation were successful, the limb was of but little service. From all he had read, heard, and seen, he was of opinion that the successful cases would have got well without interference with the knife. The specimen that had been handed round showed attempts at reparation had been made in those where the operation had succeeded.

Mr. Dampier agreed in the main with Mr. Travers.

Mr. Clarke did not consider a case to be cured even if the patient lived twelve months after the operation, and that death was hastened by the operation.

Mr. Chalk spoke of the difficulty of diagnosing this disease from lumbar and psoas abscess, and questioned if the disease were removed with the head of the bone.

Mr. Gay could not coincide with Mr. Travers; the process of reparation in bone was so tardy that the knife should be employed to assist nature, and that by its use much constitutional irritation could be spared the patient. He would not advise the use of the knife when the manifestation of scrafulous disease was very active.

Mr. H. Smith mentioned the result of some successful cases. One, a boy, æt. 13, operated on in 1845, was now hearty and active, and could walk from Holloway to London. Another, operated on two years ago, a female, æt. 13, was seen yesterday by him, and found in a very comfortable condition, and could walk a mile without assistance. Both were Mr. Fergusson's cases. Another (Mr. Morris's of Spalding) case, operated on in 1849, was quite well, had perfect motion with the thigh, and could walk a short distance.

He had seen mistakes made concerning the position of the head of the bone, and the operation given up in consequence after the first incision had been made. The operation was advisable, because, by preventing anchylosis, the mal-position of the limb was obviated.

Mr. Lloyd had paid considerable attention to the operation in question. In some cases, but very rare ones, the operation was to be performed: he had seen patients who had died from the effects of the profuse suppuration solely; no disease could be found in the internal organs. He thought that most cases of the disease commenced as synovitis, and not from scrafulous deposit in the head of the bone, which latter ensue of disease he looked upon as unfrequent.

Mr. Coulson was of opinion that hip disease was generally of a scrofulous origin, and as amenable to constitutional treatment; that the operation should be put in force at the last stage of the disease, when all hope of recovery by other means was given up; that the constitutional disturbance was not due to the local malady, but both had the same origin.

He stated that four post-mortems at the Margate Infirmary had shown the acetabulum to be extensively diseased. In respect of the cases brought forward by Mr. H. Walton, he thought the operation should not have been performed in many of them.—*London Medical Gazette*, December, 1850.

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41. *Case of Ovariotomy; Spontaneous Disappearance of Ovarian Tumours.*—George Norman has recorded, in the *Provincial Med. and Surg. Journal* (Jan. 8th, 1851), an interesting case of ovarian tumour, in which he attempted extirpation, but was unable to succeed in consequence of extensive adhesions, and also alludes to some very interesting cases of spontaneous disappearance of similar tumours.

The subject of the case was twenty-three years of age. When admitted into the United Hospital, 19th Sept., "the tumour appeared to be nearly as large as the head of a child at birth; it was quite movable in the abdomen, and appeared to be attached below by the broad ligament of the uterus, for no doubt was entertained of its being a tumour of the right ovary. It was firm to the touch and gave no sense of fluctuation; her general health had much given way; she had pain extending over the abdomen, and at times severe cramps in the bowels; a fold of vagina protruded full two inches beyond the external pudendum, even when in the recumbent position, and she had endeavoured in vain to keep this up by a pessary before her admission. It was with great difficulty the os uteri could be felt; after a considerable examination, it was found under the arch of the pubes. She was kept in bed, took iodide of potassium, and used iodine frictions to the abdomen, still the tumour increased in size and the pains in intensity.

"The case was considered, by my colleagues and myself, to be an ovarian tumour, and that if ovariotomy were ever advisable, this patient's case was one

oalling for it. The prolapsed state of ths vagina, the weight of the tumonr, and the continned pain, rendering it impossible for her to do anything for her support; the tnmour was increasing, and there seemed to be no hope of ite growth being arrested. It was agreed that she should discontinne all remedies for n fortnight. At the end of thnt time her general health had not improved and the tumonr appeared to be as large as the impregnated uterus at the fourth, or between that and the fifth month. I then explained to the patient the nnture of the disease, told her thnt an operation had in some instances heen snccessfnl in the same disease, hut thnt the risk was great and the resnlt donhtful. She replied thnt she had expected I shonld make the proposal to her, that she had qnite made np her mind, and was ready to undergo the operation whenever I thonght proper. A delay, however, occnrred from her expecting to ho unwell in two or three days, and it was not desirahle to operate at or nenr that period. She became nnwell, nnd nfter ten dnys the opsration was fixed for the 8th of November. She left off meat for a few days before, and took a mild nperient. Fires were kept for two or three dnys in the operating theatre, and nlso in a small ward adjoining it, where it was intended she should remnin after the operation, and where she was directed to go to hed the morning of the intended operation.

"At twelve o'clock on Friday, the 8th of November, Dr. Dnvies, who kindly nndertook to mannge the ndministration of chloroform, put her fully under its influence in her bed, npart from nll those assembled in the theatre adjoining. In a state of perfect nnconsciousness, she was hronght into the theatre, and kept in that state during the whole time she remained there. An incision was made in the linea alba, ahont five inches in length, commencing an inch above the nmbilicns, and avoiding that, it was extended downwards towards the pubes. The periostenm was raised with a pair of forceps, nnd opened to nearly the same extent; instead of any part of the tumour appearing, several convolutions of the small intestine protruded; these with some little delay were returned into the ahdomen with great adroitness, hy my colleague Mr. Goro, and retained there. During that time, I had ascertained that the anterior parietes of the abdomen adhered very considerahly, and firmly, to the tnmour on each side of the incision; also that the adhesions helow were considerahle, and apparently insnrmountable, and it was then discovered that a portion of the small intestine, full two inches in length, adhered firmly to the anterior part of the tumonr. All hope, therefore, of removing the tumour heing gone, no time was lost for the purpose of ascertaining its precise nature, hnt the integnments were hronght together hy five common sntures, straps of adhesive plaster were applied, some folded lint placed over with a hnndage, nnd she was removed to her hed in the same state of unconsciousness as when she was hronght from it. I snw her four hours after; she was then recovering from the effects of the chloroform, hut was snffering from sickness, nnd pain in the nbdomen. Pulse 115, of good strength and fullness. Tho pntient, after continuing in jeopardy for a few days, recovered.

"On the fifteenth day after the operation, it was ascertained thnt there was no protrusion of the vagina, nnd it appeared to me on examining the abdomen that the tumour was not of the same size as it was nt the time of the operation. The lower pnrt of the wonnd still remained open, hut the quantity of dischnrge was too small to admit of snpposing it came from the tumour. The diminntion was snpposed to arise from the total abstinence from food for some days, the low diet afterwards, and the constant recumbent position. After this time, it nppeared to me that the size of the tumonr was gradually diminishing, although she was taking animal food, and hy the end of November it was quite evident that the tumour was not more than half its former size. An examination per vaginam was made. The vngina was perfectly natural, and the os uteri was foand in the ordinary position. The pntient continned to improve, she gained flesh, and her conntenance regained the healthy nppearance. She was, however, kept to her bed, as the lower portion of the wound was not quite healed; soon after, however, it healed, and she was allowed to get np, from which she fonnd no inconvenience, and she was shortly ahle to walk abont the ward with freedom.

"To account," observes Mr. Norman, "for the very considerehle diminntion

in the size of the tumour which has taken place since the operation, is a matter of difficulty, and can only be one of conjecture. It may be that a certain degree of inflammation followed the exposure and the handling of the tumour (though there was very little of the latter), and that the vessels of the normal structure of the ovary may have poured out fibrin, and so formed a barrier between the cysts forming the bulk of the tumour and their supply, and this ultimately may have compressed and obliterated them; but be that as it may, the fact of a most important diminution remains, and as the young woman resides in Bath, I shall be enabled to know the more permanent result.

"What has occurred in reference to this tumour may throw some light on cases where such tumours have spontaneously disappeared, of which I believe there are many instances. I had an opportunity of ascertaining one recently. A lady whom I had examined several times nearly twenty years ago had an ovarian tumour full as large as the one we have been considering. I saw her a fortnight ago on another occasion, and had the opportunity of examining the abdomen; I could find no trace of the tumour; her account was that the tumour had remained for some years as when I had examined it, that in the last few years it had gradually diminished, that latterly she could only occasionally find it, and that it was very small. I did not find it, but it may be that, being small, it remains for the most part in the cavity of the pelvis, and she described symptoms which made that probable, but it was not admissible to make an examination per vaginam, to investigate it. Another case has been recently told me by Dr. Robert Ferguson, of Park Street, Grosvenor Square, of a lady who consulted him for an ovarian tumour, of considerable size, and in whom, on her returning to him twelve months after, he could find no trace of it. I know another lady, whose abdomen I had frequently examined, who had a similar tumour full twenty years ago. Sir Astley Cooper also examined it, and gave the same opinion I had given. In this lady, who is now living, it produced nothing more than inconvenience, and if I may judge from the altered appearance of her shape, the tumour must now be very much diminished, but I have had no opportunity of examining it. I have also known an instance where a considerable tumour of the kind formed a communication with the vagina, and after a continued discharge the tumour disappeared, and this person is now living. I know another lady who had for some years a tumour in the abdomen as large as a child's head, which also produced a displacement of the uterus and other distressing and painful symptoms, but which have now entirely ceased, and the tumour became diminished in size. Another instance has been related to me by Dr. Brahent, of a lady who had a large tumour in the abdomen for many years, which always became larger at the time of menstruation, and which gradually diminished after the cessation of that function, and finally disappeared.

"I apprehend the case in which I have operated must be placed as opposed to the propriety of the operation, for if in that case it was not possible to foreknow the existence of insurmountable adhesions, I do not know how anything like certainty can be arrived at; and as this patient's life was certainly in jeopardy for three days, one cannot but think such explorative operations must be attended with considerable danger. Add to this the proportion of deaths after the tumours have been removed, and it will appear probable that the balance will turn on that side. The subject, however, is now fully and perfectly under the consideration of the profession, a great mass of information has been gained, and more will no doubt, for it is to be hoped that every case, whether successful or otherwise, will be recorded, and also those cases of ovarian tumours which have remained harmless, as well as those which have proved fatal, and then we may expect from our profession a dispassionate and correct conclusion."

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42. *Case of Tumour for which the Operation of Ovariotomy was attempted more than twenty-five years ago, with Dissection.*—Dr. Taylor read to the Edinburgh Medico-Chirurgical Society, December, 1850, the case of Magdalene Berry, which had been for twelve years under Dr. Myrtle's observation, and had recently terminated fatally. On dissection, a cicatrix was seen extending from the sternum to the pubes. The abdomen did not appear larger than is usual between the fourth and fifth months of pregnancy. A large tumour was felt,

strongly adherent anteriorly to the abdominal parietes, occupying the lower part of the abdomen, and movable. On opening the abdomen, strong adhesions were found between the cicatrix and omentum. The vessels of the omentum were very large, as was reported twenty-five years ago by Mr. Lizars in his account of the operation, which he attempted for the removal of the tumour. There were firm adhesions between the anterior surface of the tumour and the abdominal parietes, and between its superior and posterior surfaces and the large and small intestines. The peritoneal surfaces of the bowels were adherent at various points. The tumour was found to be a fibrous tumour of the uterus connected with its fundus by a narrow fold of peritoneum. Both ovaries were small, and in their proper position. The uterus was atrophied. There was great softening and dilatation of the heart. The patient, while under Dr. Myrtle's care, was affected with general dropsy. She had derived marked benefit from the use of diuretics and purgatives. Death had taken place from apoplexy. In Mr. Lizars' work on "Extraction of Diseased Ovaries," it is recorded that, immediately after the operation, which it was deemed imprudent to complete, violent inflammatory symptoms supervened, which left permanently well-marked results notwithstanding the abstraction of 111 oz. of blood within thirty-six hours or so after the operation, as well as the administration of antiphlogistic remedies. The actual cautery was afterwards had recourse to, as also a seton drawn through the anterior portion of the tumour and superincumbent soft parts. Dr. Myrtle's communication concluded with some observations on the difficulty of arriving at a correct diagnosis in cases similar to the above.

The president made some observations on the case as an additional illustration of the unjustifiable nature of the operation of ovariotomy. The recovery of the patient, after the multiplied dangers to which she was exposed by the incision, the resulting inflammation and the seton, was very remarkable.

Professor Simpson could not agree with the president in condemning the operation of ovariotomy as in all cases unjustifiable. It had been performed in many cases in which he believed its adoption was unjustifiable; but where the patient was evidently soon to die, in consequence of repeated tappings, or otherwise—and where the question was one of certain and speedy death from the disease, or possible recovery and continuation of life from the chances of the operation—and where, in addition, there was no counter-indication to the operation from adhesions, &c., he believed it might be the duty of the surgeon to afford the patient the chances of escape by ovariotomy; and the actual number of recoveries after the operation seemed sufficient to justify its adoption under such circumstances.—*Monthly Journal of Medical Sciences*, Feb. 1851.

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43. *Femoral Aneurism cured by Compression.*—Mr. Smyly communicated to the Surgical Society of Ireland, November 23, 1850, the following case of femoral aneurism, successfully treated by compression:—

"Patrick O'Gorman, aged 48, a schoolmaster, came under my care in April, 1847, three years and a half ago. He stated that, in August, 1846, eight months before I saw him, when walking at his ordinary gait, he suddenly lost, in a great measure, the use of his right leg, and with great difficulty got on half a mile further. Next day he could not put his foot under him, or leave his bed. He suffered intense pain in the middle of the thigh, in the knee, and down the outside of his leg. It was so severe as to prevent him leaving his bed for a week. It then abated, but has returned occasionally, with more or less severity ever since. He is a married man, sober, and well conducted. He was admitted into the Meath Hospital on the 14th of April, 1847. A pulsating tumour, the size of an egg, having all the characteristics of aneurism, existed in the lower part of the middle third of the right thigh. His general health was good. There was excitement of the circulation, and a slight bruit de soufflet at the heart. In consultation with my colleagues, it was determined to treat this case by compression, so applied as not to interrupt completely the flow of blood in the femoral artery. The patient being bled, and confinement to the recumbent position being strictly enjoined, pressure was made at two different points alternately, by means of two clamps—one applied to the exter-

nal iliac artery, the other to the femoral. This treatment was persevered in with more or less assiduity for nearly three months, with no other advantage than a diminution in the size of the tumour. Weary of the restraint, he desired to leave the hospital; and as he fully understood the use of the instruments, and the plan to be pursued, he was permitted to go out. He was then appointed schoolmaster to the National School at Blackrock, and continued to fulfil his arduous duties for about three months, when, having walked a distance of two miles, he suddenly felt a severe pain in the tumour, extending down the leg. The pain continued unabated for two days, and then gradually subsided. Seven days after the occurrence of the severe pain, he called upon me. On examining the tumour, all pulsation had ceased. This he found to have taken place two days ago, the contents of the tumour to have become consolidated, and all pain to have disappeared. Three months after the cessation of pulsation, I had an opportunity of examining the patient: the tumour, though diminished in size, was still to be felt about as large as a walnut, and very hard.

"November 15, 1850, I called upon him, and found him in the enjoyment of good health, equal to perform the duties attendant upon the management of a large school. A very small hard tumour is still traceable at the seat of the aneurism, and pain is sometimes felt down the outside of the leg. On examining the heart and large arteries, no morbid sound is audible; they are apparently free from disease."

Reflections.—1st. When we consider the protracted period required to accomplish a cure in this case, we learn not to abandon hopes of a cure when our efforts are baffled, and prove unavailing, even for six months.

2d. We find the excitement of the circulation and the hurried de soufflet to subside and disappear on the cure of the aneurism just as similar sympathetic affections are relieved when the cure is affected by ligature. This case, then, meets the objection urged against the treatment by compression—viz., that disease of the heart is more likely to attend it than when a ligature is applied; for we see the same beneficial result follow the cure of the aneurism in this as in those cases cured by ligature.—*Dublin Medical Press*, December 11, 1850.

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44. *New Instruments for the Cure of Stricture.*—Mr. Thomas H. Wakley exhibited to the Medical Society of London (Jan. 25th, 1851) a set of new instruments for the cure of stricture of the urethra. He remarks, in submitting the instruments to the consideration of the Society, that the subject of the treatment of strictare of the urethra had been much discussed within the last year or two, and had given rise to a great deal of controversy. It certainly was not a settled question what should be done in cases of severe permanent stricture. Mr. Syme, the distinguished surgeon of Edinburgh, had, as was known, recommended, where the ordinary means of treatment had failed, the division of such strictures by perineal section. Probably the instruments which he then had the honour of bringing before the notice of the Society would, in some cases at least, render such an operation unnecessary. He had used them in several cases already with very satisfactory results. The instruments he at first used were by no means of a refined or perfect manufacture, yet the advantages obtained were of a decided character. The instruments he now produced had been manufactured by Messrs. Weiss & Co., and, as might be expected, they were very perfectly executed. They consist of—

1. A catheter, thirteen inches in length, of a very small size, slightly curved at the extremity; the stem quite straight, and having at the end a worm for the reception of the screw of the directing-rod.

2. A small thumb-slide (removable at pleasure), screwing closely upon, and acting as a handle to, the catheter.

3. A steel rod, which passes into the catheter as far as the screw, at which part both are united by two or three turns of the rod. The rod makes an addition of five inches to the length of the catheter. The rod and catheter combined form the index-rod, or director, for the metallic and elastic tubes.

4. Of the silver straight tubes, there are nine of graduated sizes; the first is only one size larger than the index-rod, and the others regularly increase in

circumference; the last, or No. 10, corresponding with that number of the ordinary bougie. These tubes are all of a conical shape at their distal extremities, and are so constructed as to fit the mouth of each tube with extreme exactness at the surface of the index-rod. They thus slide with the most perfect ease along that guide, and being directed by it, if the rod be in its proper situation, the tubes cannot take a wrong course or make a false passage, but must pass through the stricture.

5. There are also three *elastic tubes*, composed of a flexible metal, covered with elastic-gum fabrics. This combination gives to the instrument very considerable strength, without rendering it clumsy or bulky. The extremity of each of these flexible tubes has the same form as that of the silver tubes, and fits with perfect accuracy the surface of the index-box.

Supposing, then, that a patient having stricture of the urethra is before the surgeon for operation, the mode of proceeding is as follows:—

First, introduce the catheter, as gently and with as much ease as possible, completely through the contracted part of the urethra into the bladder. Having done this, withdraw the stylet, and the surgeon having satisfied himself, by the escape of urine, that the instrument is in the bladder, insert the smaller extremity of the steel rod into the catheter, and having secured it, by making two or three turns of the rod, remove the thumb-slide and then pass No. 3 silver tube upon the index-rod right through the stricture or strictures. In performing this operation, the passage of the instrument will be much facilitated by giving to the flanges a rotatory motion as they are held between the fingers and thumb. This tube being withdrawn, the others may all be passed in a similar manner, and in regular succession. The number to be introduced must of course be determined by the operator. After the last metallic tube is withdrawn, an important object is still to be secured—that of *keeping the command of a free urethra*. How is that to be done? This certainly is a point of considerable importance. Mr. Wakley stated that he was happy to say that it might be accomplished with the greatest ease by passing one of the *elastic tubes* over the index-rod, as was done in the case of the silver tubes. One of the flexible tubes being now in the bladder, *the index-rod is to be withdrawn through it;* this may be done with the most perfect ease and facility. The *flexible tube* may be left in the bladder to serve the purpose of a catheter, and also to afford a safe channel or guide for the re-introduction of the silver catheter or index-rod.

The Society would not fail to perceive that the action of these instruments was safe and simple, and he had the pleasure of stating that the use of them had given him very great satisfaction. The application of the knife for the relief of stricture had been much condemned, although it had been strongly advocated by Mr. Syme, who was undoubtedly a high authority. Still he (Mr. Wakley) could not refrain from expressing a belief that there were strictures which might be removed by the instruments now before him, although Mr. Syme might consider that in such cases the perineal section would be absolutely necessary to effect a cure. Time and experience in the trial of both plans would be required to enable a decision to be formed as to their merits. Mr. Syme had remarked, in a letter published that day, that he had endeavoured to establish two positions: "First. That the division of a stricture by external incision, upon a grooved director, passed fairly through the contracted part, is an operation free from all ordinary sources of danger. Secondly. That, by this procedure, strictures which resist every other mode of treatment are apt to resent seriously even the gentlest use of simple bougie, may be speedily removed so as to allow instruments of the largest size to be introduced without difficulty or inconvenience." The first proposition demanded particular attention, because he thought the plan of treatment now proposed, by tubular expansion, would, in many cases of stricture contemplated by Mr. Syme, render the perineal section unnecessary. If the grooved director mentioned by Mr. Syme could be "passed fairly through the contracted part," of course the small-sized catheter or index-rod now shown could also be guided through the stricture into the bladder. Necessarily, if the one instrument could be passed, so could the other; and the passage being thus secured, the tubes, both metal-

lic and flexible, might be made to take the same course without the slightest danger of making a false passage. In some very obstiate and inveterate strictures, he had succeeded in affording relief, almost without difficulty. Some of the strictures appeared to be of the worst possible form. He was glad to perceive some gentlemen in the room who had been present when the instruments were used at the hospital. Amongst them he observed his colleague, Mr. Gay, who could acquaint the Society with the result of the treatment as pursued in the case of one of his patients. In that instance the man had been treated in the ordinary way, but without success. It was suggested that it was a case which would effectually test the efficiency of the new treatment. The rod and tubes were introduced in the presence of Mr. Guthrie and several other gentlemen. After Mr. Gay had very cleverly, but not without some difficulty, introduced a No. 2 catheter, the metallic tubes from No. 3 to No. 9 were passed without a check. No. 8 elastic tube was then passed on the directing catheter, and the latter instrument withdrawn, leaving the elastic tube in the bladder. He might appeal to Mr. Gay as to the accuracy of the statement. Mr. Wakley believed that in the hands of others the effects produced by the instruments would prove as satisfactory as they had been to himself. At the hospital with which he was connected the opportunities for proving their utility were very frequent, and it would afford him pleasure to show any practitioner who might honour that institution with a visit, the manner in which they were employed. The instruments had been seen by Sir B. Brodie, Mr. Guthrie, Mr. Stanley, Mr. Fergusson, and other distinguished surgeons, who all approved of the principles of treatment which their use involved. In placing the instruments before the Society and the profession, he felt confident that they would receive a fair and candid trial. On a future occasion, he should take an opportunity of offering to the notice of the Society the further results of the treatment.—*Lancet*, Feb. 1, 1851.

45. *Rupture of the Crucial Ligament of the Knee-joint.*—Dr. Stark relates, in the *Edinburgh Medical and Surgical Journal* for October, 1850, two instances of an injury, which he believes to have been rupture of the crucial ligament of the knee-joint. The symptoms, nearly identical in both cases, were the following: There was no dislocation either of the ankle or of the knee-joint; no displacement of the knee-pan; no rupture of the tendo-Achillis, or of any of the tendons round the knee-joint. The motions of the ankle, and, when the patient was sitting, of the knee-joint, in so far as its ordinary motions were concerned, appeared perfect. In one case, when the patient assumed the erect posture, the knee-joint was found to be preternaturally movable; and, whenever any weight was endeavoured to be thrown on the right leg, the knee fell against the left leg, *and bent with equal facility forwards or backwards*. When the legs were extended, the slightest pressure on the patella caused the foot to be thrown upwards, *and the leg could be bent forwards on the thigh to a certain extent*. No pain was complained of in the knee-joint, but only a sensation of weariness; and there was no redness, nor swelling, nor effusion of blood.

Dr. Stark made several trials on the first patient, to ascertain the accuracy of the diagnosis. When the knee was bound tightly with a handkerchief, and kept slightly bent, the patient could almost bear the weight of the body on it; but the moment he endeavoured to straighten the limb *the knee bent backwards under him*, and he fell to the ground unless supported. The lateral motion of the tibia on the thigh-bone, though freer than usual, was yet so very limited that there was no reason to conclude that the lateral ligaments were injured.

The treatment consisted in fixing the limb in a nearly straight position, just so slightly bent as to allow the flexors of the leg to have a slight advantage over the strong extensors attached to the patella. A strong flat steel spring, fourteen inches long, with a slight curvature, was softly padded and bound to the back of the knee-joint, half of its length projecting down the back of the leg, half extending along the back of the thigh. The foot and leg to above the knee were then bandaged moderately tight. The injury was ultimately recovered from in both cases; but the knees remained weak, and the patients had to use support for a considerable period. In one case it was five months, in

the other three months and a week before the use of crutches could be dispensed with.

Dr. Stark thinks these cases interesting from their rarity, and from their proving that the injury in question may be perfectly recovered from. He infers that cure must have been finally effected by a reunion taking place between the ends of the ruptured crucial ligaments.—*Lond. Jour. Med.*, Dec. 1850.

46. *Cotton Wadding as an Application to Bed-Sores and Varicose Ulcers.*—In the treatment of wounds and ulcers, one great indication is to protect the parts from exposure to the air. Adhesive plasters, and especially collodion, often serve this purpose, but are inapplicable where a large extent of surface is exposed. In these cases we believe the application of cotton-wadding to be an effectual means of fulfilling the indication. Mr. Robert Jones, of Conway (*Lancet*, Sept. 27, 1850), relates the case of a girl, aged 16, who had been suffering from typhus fever, and who had an extensive sloughing sore of the nates, with profuse and offensive discharge. Wine and bark were prescribed, and broth and beef-tea given. Mr. Jones applied some cotton-wadding to the part, with a view of giving her a soft cushion to lie upon, as well as to absorb the abundant discharge. After the application she appeared much relieved. On examination, three days after, the parts covering the spine and the crest of the ilium were granulating, the slough covering them had partially separated, and the parts beneath were looking very well. Mr. Jones has also treated successfully a few cases of varicose ulcers of the lower extremities, by the application of cotton-wadding. The manner of applying it is simply to cover the ulcer, and to dress the patient every second or third day, a roller being applied over the cotton. Perfect quietness, and keeping the limb in the horizontal position, are enjoined; and three weeks or a month are generally sufficient for a cure.—*Lond. Med. Jour.*, Dec. 1850.

OPHTHALMOLOGY.

47. *Preparatory and After-treatment in Cataract Operations.* By Arthur Jacob, M. D.—The value of preparatory and after-treatment as part of the surgeon's care in cataract operations has been fully appreciated, and, in practice, amply made available; but the value of a respectful consideration of all the functions of the animal economy upon which health depends has not been so well understood. It is assumed that a patient should be prepared for an operation by taking physic and abstaining from food, yet a rational man, acquainted with the consecutive operation of each apparatus provided for the growth, repair, and preservation of the living being, may well doubt the correctness of such a view. The universal faith reposed in the practice of giving and taking physic has led practitioners not only to place too much reliance on that resource, but to resort to it sometimes to the injury of the patient, as I find in the case under consideration. In preparing a patient for operation, I do not act on the belief that empty bowels are essential to health, or that what are called *fæces* should not be found in the intestinal canal; on the contrary, I proceed on a conviction totally different. If a patient be in good health, notwithstanding an habitual retention of the contents of the bowels beyond the prescribed periods, I do not wish to risk an interruption of health by disturbing the natural functions of the stomach and bowels, and I therefore refrain from giving physic. But if the patient be not in good health, I of course endeavour to bring him into that condition by every means in my power, and resolutely resist every attempt to induce me to operate until I have accomplished that object. Above all things, the state of the digestive organs should be carefully studied, and if found defective, if possible, repaired. Nothing seems to require more attention than the state of the tongue as indicative of the state of the stomach and bowels. If it be white, or coated with discoloured adhesive mucus, the functions of assimilation and nutrition are probably imperfectly performed, and a resulting tendency to destructive inflammation from local injury is engendered.